United Nations A/AC.259/4

General Assembly

Distr.: General
10 April 2001

Original: English

United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea
Second meeting
7-11 May 2001

Marine science and the development and transfer of marine technology, including capacity-building

Submitted by the delegation of Norway

Summary

The present document has been prepared with the assistance of experts in marine science and is intended to analyse and identify possible plans of action to activate the new regime on marine scientific research established by Part XIII of the 1982 United Nations Convention on the Law of the Sea. There is a risk that the new marine science regime will remain an "empty shell" unless concrete policies and results-oriented initiatives are formulated and implemented. At the core of such results-oriented initiatives lies the implementation of national regulations relating to foreign marine scientific research in waters under national jurisdiction and the identification of national focal points to coordinate such research activities. In this document we propose a plan of action for the implementation of Part XIII and are using Norwegian model legislation as an example to this end. Compliance with article 76 and with article 4 of Annex II to the Convention represents a major challenge for coastal States, including in particular developing countries and small island developing States. We are suggesting a plan of action that will enable coastal States with limited resources of their own to acquire data on mapping of the outer limits of the continental shelf. While scientifically based regulatory management regimes are often well established and given considerable resources in the industrialized world, developing countries and regions often lack the human and financial resources to establish measurements on an effective scale. We are suggesting a plan of action for assisting a developing region to draw up a scientifically based integrated ocean management regime. The emphasis on an ecosystem approach to marine management has a number of implications for marine science. The final part of the document proposes a plan of action for a scientifically based ecosystem approach to the management and protection of marine ecosystems.

01-32892 (E) 300401

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A. Implementation of Part XIII of UNCLOS as a first step in a plan of action for marine scientific research

1. The entry into force of UNCLOS in 1994 brought into being a new regime for the conduct and promotion of marine scientific research. Under this regime all States and competent international organizations have the right to conduct marine scientific research and the duty to promote and facilitate, the development and conduct of such research.

2. There is a risk that the marine science regime, as defined in Part XIII of UNCLOS, will remain an "empty shell" unless concrete policies and results-oriented initiatives are formulated and implemented. At the core of such necessary and results-oriented initiatives lies the implementation of national regulations relating to foreign marine scientific research in waters under national jurisdiction and the identification of national focal points to coordinate such research activities. **The adoption of regulations on marine science research, based on a common understanding of those rules, will provide clarity and predictability for people involved in preparing and planning research projects, facilitate the introduction of standard procedures in accordance with international practice and ensure better flow of information through authorized organizations and channels to create acceptability of results. Thus the adoption of such regulations represents a first step in a plan of action for marine scientific research.**

3. **Norway recently adopted new regulations relating to foreign marine scientific research in Norway's internal waters, territorial sea and economic zone and on the continental shelf, in accordance with Part XIII of the Convention. These regulations, which are contained in the annex to the present document, may serve as a model of the implementation of Part XIII at the national level. The standard application form incorporated in the Norwegian regulations (see appendix) is the standard form used by the International Council for the Exploration of the Sea (ICES).**

B. Marine scientific research and mapping of the outer limits of the continental shelf: a plan of action to enable coastal States with limited resources of their own to utilize data from marine research projects

4. For several decades the hydrography of the seabed and the geology of the subsurface of the deep oceans and outer edge of continental margins have been important targets of marine scientific research throughout the world. Two good examples of well-known research programmes in this field are the Deep-Sea Drilling Project (DSDP) and the follow-up Ocean Drilling Project (ODP), both of which involve world's best academic and techn cal expertise in the field, and have been financed and organized as scientific consortia. Several major States with substantial resources and know-how are also undertaking their own major research and survey programmes in the same field. Consequently, a substantial volume of bathymetric and geophysical/geological data obtained from the continental margins are stored in scientific institutions and data centres around the world. Because of the vast areas in question and the large costs involved, data accumulation in these areas has been slow, and the data density is at present only a fraction of what is common in shallower areas with offshore petroleum exploitation. Therefore, despite the relatively long research history, our knowledge of the hydrography and geology of the deep oceans and the continental margins is unsatisfactory and research in this field still has a long way to go.

5. The provisions of article 76 define how the limits of the continental shelf beyond 200 nautical miles from the baselines are to be delineated. These provisions imply that the hydrography and geology of the outer parts of the continental margins of States intending to establish such limits must be mapped by certain methods. Article 76, paragraph 8, and Annex II, paragraph 4, require the States in question to submit the details of these limits to the Commission on the Limits of the Continental Shelf along with supportive scientific and technical data. The main volume of the requested supportive data will consist of the bathymetric and geophysical (mainly seismic) data used in the original mapping of the limits. Annex II, paragraph 4, also states that such States must submit all the required information and supportive data within 10

years after the Convention entered into force for the individual State. This means that in the next few years we need to speed up the acquisition of bathymetric and seismic data on the outer parts of the continental margins and the adjacent deep sea, so that all relevant States can comply with the provisions of article 76. This will mean a dramatic increase in available bathymetric and geophysical data from waters covering the transition zone between the deep oceans and the outer continental margins.

6. However, all the data that will be acquired for the purpose of mapping the limits of the continental shelf are of the same type as those collected by research institutions and organizations in their various studies of the continental margin and deep ocean. And similarly, all the bathymetric and geophysical data acquired on the outer edge of the continental margins and adjacent deep sea by the world's marine research institutions and organizations, are highly relevant for any State that intends to establish the outer limits of its continental shelf beyond 200 nautical miles.

7. It is obvious that a coastal State will benefit from access to all existing bathymetric and geophysical data from the relevant research databases, in order to prepare a submission. Articles 248 and 249 of the Convention give a State the right of access to all data acquired by any scientific institution within the continental shelf of that State. Article 249 also lays down the duty of the research institute or organization to provide the host State with reports and research results and to provide ready access to all data acquired from the continental shelf. According to article 246, any marine scientific research activity on the continental shelf shall be conducted only with the consent of the coastal State. Since the rights of a coastal State over the continental shelf in accordance with article 77 exist independently of the final delineation of the outer limits in accordance with article 76, any such State may apply articles 246, 248 and 249 to gain access to and be provided with the relevant scientific data to establish such delineation. This opportunity will be particularly important to coastal States that lack their own funds and expertise.

8. Furthermore, article 249 states that the research institution or organization has a duty to ensure that the research results from the continental shelf are made internationally available (duty to publish). This is of benefit both to the coastal State (making the shelf area known to possible investors) and to the international research community.

9. **A plan of action to enable coastal States with limited resources of their own to utilize data from marine research projects may include:**

(a) An investigation of where and how many research data are already available and the extent of such data, and steps to gain access to these data according to article 249;

(b) Taking steps to encourage other States and international research organizations to undertake research projects on the continental shelf, particularly on the outer edge of the continental margin and adjacent areas;

(c) If financially possible, entering into joint ventures with appropriate research institutions for particularly critical research projects.

10. A major challenge for a State with limited resources may be to keep track of all research activity and the associated data acquired on its continental shelf through time. A second challenge is to find a place to store the copies of all the research data and information that according to articles 248 and 249 are to be made available to the State. With the particular needs of developing countries in mind, we should seek to establish an infrastructure for storage and easy retrieval, and for keeping track of appropriate data sets that are still being processed by the research institution. This infrastructure should be established under a politically and nationally neutral organization to ensure integrity. At the same time it must have access to the human expertise and facilities, including computer and communication equipment, to handle these types of data. Within the framework of the United Nations, the GRID system of the United Nations Environment Programme (UNEP) may be a suitable candidate to host and develop a centre for research data from the outer continental margin intended to serve the needs of coastal States, and developing countries in particular.

C. Marine scientific research and the transfer of marine technology, including capacity-building. A plan of action for assisting a developing region in drawing up a scientifically based integrated ocean management regime

11. The state of the world's living marine resources continues to be of concern for the international community. Several factors add to the pressure on resources, such as:

(a) A continuing increase in the efficiency of fishing vessels;

(b) Accumulated overcapacity in fishing fleets;

(c) Increased population in coastal areas;

(d) Rising prices for sea products in the world market.

12. To counteract this trend and promote sustainable utilization of the resources, concerted action is needed in several fields, as outlined in UNCLOS. The main tools available are:

(a) Establishment of scientifically based management systems;

(b) Effective monitoring, control and surveillance systems for the fisheries (MCS systems);

(c) Scientific monitoring of the resource base and the environment.

13. While regulatory regimes are usually well established and allocated considerable resources in the industrialized parts of the world, many developing countries and regions do not at present not have sufficient human and financial resources to establish such measurements on an effective scale. At the same time they are fully exposed to all the above-mentioned pressures that lead to depletion of the resources. The situation is therefore especially serious in those countries and regions. Article 266 of UNCLOS obliges the international community to assist in the development of the scientific and technological capacity of developing States when requested, with a view to accelerating their social and economic development.

14. A management regime is no stronger than the weakest link in the chain, and therefore a concerted and balanced action is needed to establish management regulations and MCS systems for the fisheries based on research on the resource base. The establishment of a management regime demands considerable resources as regards infrastructure, technical instrumentation (including research vessels) and development of the necessary human knowledge base and skills. Building institutional capacities is a long-term process, and occasional setbacks should be expected. In the developing world it is almost impossible to develop a single public sector, such as a fisheries management system, isolated from the rest of society. Highly developed skills are also needed in other sectors, both private and public, and will over time move towards where the best terms are offered. Development of a management regime must therefore also contain a plan on how to retain the knowledge that is accumulated.

15. In areas where there is an industrial fishery present, the cost of running the management regime can be gradually transferred to it, but where there are extensive small-scale fisheries this is a more complicated issue. In such cases, development assistance to set up and run a management regime is expected to be needed for a longer period of time.

16. Over time, data from an effective MCS system can provide important information about the state of the exploited resources included in the management regime, but such indirect methods have serious limitations if the ecosystem is highly dynamic or where anomalies occur. In such cases direct methods such as resource and environmental surveys produce more relevant data for adequate management decisions. Modern research vessels are costly to build and operate and their operation maintenance require expertise that is in great demand. Thus, the costs of acquiring and running a research vessel are often too great for a developing nation before the management regime is well established, and it should be seen as an international responsibility to assist a developing fishing nation in this early critical phase.

17. In many cases the extent of the resources to be surveyed and the research tasks to be undertaken do not require a vessel to be available all year round. Moreover, fish resources, more often than not, are distributed across national borders and are thus shared resources with neighbouring countries. If this is the case, a national survey only gives an incomplete picture. In the same way, environmental problems mostly transit borders. In such cases joint surveys using one or more vessels are more appropriate. The

need for survey vessels can thus be more a demand on the regional level than on the national level.

18. Norway has more than 25 years of experience of running a modern research vessel, which has been put at the disposal of developing fishing nations and run in cooperation with the Food and Agriculture Organization of the United Nations (FAO), and at times also funding from the United Nations Development Programme (UNDP). For the first 15 years the vessel, the *Dr. Fridtjof Nansen*, was used to map new resources and monitor the resources of established fisheries in developing countries. These tasks were offered as input to national management, but without including these institutions' capacity to handle such information effectively. In the subsequent 10 years the monitoring of resources and the environment has been an element of a more integrated plan involving capacity-building in research and management through institutional cooperation, and support for the development of an MCS system, in the case of Namibia. This integrated effort has been an important factor towards a sustainable management regime in Namibia, which now largely is independent in terms of both funding and research, allowing the Norwegian contributions to be phased out gradually.

19. The report of the Secretary-General on oceans and the law of the sea lists a number of marine research programmes, mostly focusing on oceanography, the environment or climate change. At the same time international research projects to monitor the state of world marine resources are more limited, both in number and in scope. In the past 15 years, a lack of funding has forced FAO to scale back its natural resources projects in the developing world, and reports on the state of the world marine resources have become dependent on fishery information of varying quality. To obtain more accurate information on the true state and direction of development of marine resources and trends in the marine environment, it is necessary to revive training and monitoring on a larger scale, with substantial support from the developed world. If this is to succeed, we need a concerted action, that deals with all aspects of management regimes. In addition, the recipient States must make clear commitments to follow a programme for taking over full responsibility for the management system, both financially and in terms of human resources, once it has become fully operational.

20. A plan of action for a developing region could consist of the following elements:

(a) A full review of the history and status of management for a region;

(b) A plan for an integrated programme for fisheries management, including monitoring of resources, implementing an MCS system and a plan for capacity-building in all relevant fields;

(c) Commitment from institutional partners in the developed world and from financial institutions;

(d) A plan for stepwise transfer of financial and professional responsibilities so that the region can become self-reliant.

Critical factors will be:

(i) Whether the country/region has a strategy to cope with brain drain to neighbouring sectors;

(ii) The development of a system where part of the revenue accumulated from the fisheries is used to finance the management system;

(iii) Whether the international community is prepared to contribute with resources to set off the project;

(iv) Whether the United Nations organizations dealing with the issue (FAO, UNDP) can provide sufficient resources and thus create with the other partners the momentum for a real change in attitudes and in the management regime.

D. Marine science and technology and the need to adopt an ecosystem approach to the management and protection of marine ecosystems. A plan of action to assist a developing region in devising a scientifically based ecosystem approach to the management and protection of marine ecosystems

21. Marine ecosystems are open systems. Ocean currents flow through them carrying plankton organisms and chemical substances, including pollutants. Fish and other organisms may migrate

extensively across any defined ecosystem boundaries. Marine ecosystems are also characterized by high variability. This is related to the mode of reproduction of many fish and planktonic and benthic (bottom-dwelling) organisms which release large numbers of small eggs or larvae into the water to be dispersed and transported with the ocean currents. Only two of the large number of eggs produced by a female need to survive to reproduce in order to maintain the population over time.

22. The strong association between populations of marine organisms and the ocean currents and physics makes ocean climate variability a primary driving force for marine ecosystem variability. In addition there are strong biological interactions, such as predator-prey relationships, among the populations of organisms inhabiting a marine ecosystem. The variability of the ocean climate and the biological interactions work in concert to determine the dynamics of the constantly changing states of marine ecosystems.

23. Humans are part of marine ecosystems through their use of the seas and coastal waters for a number of different purposes, such as fisheries, aquaculture, shipping, etc. The various human activities have an impact not only on the same ecosystems, but also to a considerable extent, directly or indirectly, on the same components of marine ecosystems.

24. The need to adopt an ecosystem approach to the management and protection of marine ecosystems has already been recognized. In the Statement of Conclusions of the Intermediate Ministerial Meeting in 1997 in the North Sea Conference framework, the ministers and European Union commissioners stated (para. 2.6) that further integration of fisheries and environmental protection, conservation and management measures should draw upon the development of an ecosystem approach.

25. At a Workshop on the Ecosystem Approach to the Management and Protection of the North Sea, held at Oslo in June 1998, a conceptual framework for an ecosystem approach was developed. In June 2000, the Advisory Committee on the Marine Environment (ACME) of the International Council for the Exploration of the Sea (ICES) considered this and other similar frameworks. ACME proposed the following definition for an ecosystem approach to ocean management:

> "Integrated management of human activities based on knowledge of ecosystem dynamics to achieve sustainable use of ecosystem goods and services, and maintenance of ecosystem integrity."

ACME also proposed a general framework for an ecosystem approach. This identified the following five modules in repetitive sequence in a management process: Ecosystem objectives;

- Monitoring and research;
- Integrated assessment;
- Advice;
- Adaptive management.

26. Work is in progress to develop ecosystem objectives for the management of the North Sea. A workshop on Ecological Quality Objectives (EcoQOs) for the North Sea was held in Scheveningen, the Netherlands, in September 1999. A set of 10 issues was agreed for which EcoQOs may be developed in subsequent work. This work is now in progress in ICES, the OSPAR Commission and in a special project organized by the Netherlands and Norway.

27. ICES and the Intergovernmental Oceanographic Commission (IOC) of the United Nations Economic and Social Council (UNESCO) have established a joint Steering Group on the Global Ocean Observing System (GOOS) to promote the development of GOOS activities in the North Atlantic. The Steering Group has planned an ICES/IOC/OSPAR/EuroGOOS workshop on North Sea monitoring to be held in September 2001. The aim is to harmonize the monitoring of living marine resources and the environment in the North Sea so as to improve cost-efficiency through international cooperation and to support the development of an ecosystem approach.

28. An integrated environmental assessment is a comprehensive analysis and statement on the status of the environment, environmental trends and the extent of the impact of a range of human activities. There are two main challenges in conducting an integrated environmental assessment:

(a) Any influence of human activities must be distinguished from the background of large natural variability;

(b) The effects of different human activities must be distinguished from each other.

29. OSPAR has recently completed a comprehensive assessment of the North-east Atlantic, as published in the OSPAR Quality Status Report 2000. Fisheries and various forms of pollution are identified as the major environmental concerns in this sea area. Although this assessment was a comprehensive process involving many scientists and experts over a five-year period and drawing on many available data sources, our ability to draw firm conclusions about the state of marine ecosystems and the impacts of human activities is still so limited as to be cause for concern.

30. The implementation of an ecosystem approach to the management and protection of the North Sea will be a central issue at the Fifth North Sea Conference in March 2002. It is to be hoped that this will improve the status of the exploited resources and the environmental quality of the North Sea. It may also serve as an example that may help similar development in other sea areas.

31. An evaluation of the appropriate scale is a key element in ecology and for the application of an ecosystem approach. Ecological processes occur at a continuum of scales from very small (e.g. the micro-environment surrounding a single phytoplankton cell) to very large (e.g. the global climate system). For practical management purposes, however, three main scales can be distinguished:

- Global
- Large marine ecosystem
- Local

32. Large marine ecosystems (LMEs) are defined as extensive regions, typically greater than 200,000 km^2, having unique hydrographic regimes, submarine topography, productivity and trophically dependent populations. This is the typical scale of commercial fish stocks. Fish stocks have a geographical closure of their life cycles, in which spawning migration to defined spawning areas, drift of fish larvae to suitable nursery areas and feeding migrations of juvenile and adult fish are major components. Since this geographical closure of life cycles is related to ocean currents and flow patterns, there is a close link between the submarine topography and hydrographic regimes, on the one hand, and major populations of commercial fish species on the other, in the context of defined LMEs.

33. Globally, about 50 LMEs located on continental shelves have been identified as appropriate units for scientifically supported management. Typically the LMEs span the exclusive economic zones of several neighbouring coastal States. This is, for example, the case for the LMEs covering the Norwegian exclusive economic zone, i.e. the North Sea, the Norwegian Sea and the Barents Sea. An important task is the promotion of a framework for international cooperation for the management and protection of the world's LMEs.

34. The world ocean is a continuous medium that links all LMEs. The variability of the ocean climate, which is a primary driving force for variability in living marine resources and the state of ecosystems, needs to be addressed at the global and/or large regional scale. This is important as a means of improving our ability to predict climate variability through insight into underlying mechanisms and carrying out climate change impact assessments. Through downscaling techniques, global or large regional-scale ocean climate descriptions and predictions can be used as an analytical tool to improve the assessments of living marine resources and environmental conditions in specific LMEs.

35. There are many issues in the coastal and inshore marine environment that should be addressed at the local level. At the same time it is important to assess the combined effects of all human activities in a coastal zone for the well-being of populations and the integrity of the larger ecosystem which they inhabit. The LME is an appropriate scale for such integrated environmental assessment.

36. **A plan of action for an ecosystem approach may include the following:**

(a) Stronger international cooperation is needed to promote and support the development of the ecosystem approach. This applies to cooperation across the traditional divides between applied and academic research, between monitoring and research, and between living marine resources and marine environmental protection agencies. While the ecosystem approach broadens the scope from traditional sectoral management, it provides at the same time an overall framework that helps set

priorities and promotes synergy, cost-efficiency and ecosystem sustainability.

(b) Various United Nations organizations can and should play central roles in the further development of an ecosystem approach. The GOOS programme run by IOC and WMO is a core element. For its successful implementation it is necessary to have the fisheries science community on board as enthusiastic participants in the process. Thus extensive participation by FAO should be encouraged.

(c) GOOS is an operational programme that will be implemented and further developed on the basis of existing national and international monitoring activities. It is to be hoped that the planned development of a North Sea ecosystem GOOS component will serve as a demonstration project for the usefulness of this approach. Similar efforts should be encouraged elsewhere.

(d) A number of international marine research programmes are examining ecological processes and mechanisms in detail. Examples of such programmes are Global Ocean Ecosystem Dynamics (GLOBEC), Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB), and Joint Global Ocean Flux Study (JGOFS). Field investigations in these programmes should be coordinated as far as possible with ongoing monitoring (e.g. GOOS) and other research activities. This will allow more in-depth studies of ecosystem dynamics and reap the benefits of synergy between the various research programmes.

(e) It is not possible to carry out extensive ecosystem studies in all LMEs in the short term. By concentrating on some selected cases, we will achieve a better basic understanding. This will benefit the management of particular LMEs, but the experience and results will be transferable and can benefit scientific investigations and the management of other LMEs. This applies to the general approach and methodology of marine ecosystem research and also to some extent to knowledge about interactions and mechanisms governing the dynamics of LMEs. However, particular environmental conditions and the species of organisms present must be taken into careful consideration when results and experiences are transferred to other LMEs.

(f) Test cases of LMEs used for combined monitoring and research sites to support an ecosystem approach to management should also be used for the purpose of training and capacity-building.

Annex

Regulations relating to foreign marine scientific research in Norway's internal waters, territorial sea and economic zone and on the continental shelf

Laid down by Crown Prince Regent's Decree on 30 March 2001 pursuant to sections 2 and 3 of the Act of 21 June 1963 No. 12 relating to scientific research and exploration for and exploitation of subsea natural resources other than petroleum resources, section 6 of the Act of 17 June 1966 No. 19 relating to Norway's fishery limit and to the prohibition against fishing etc. by foreign nationals within the fishery limit, section 7b of the Act of 17 December 1976 No. 91 relating to the economic zone of Norway, sections 4, 4a), 5, 5a), 7, 8, 9, 9a), 13, 21, 23, 24, 25, 32 and 45 of the Act of 3 June 1983 No. 40 relating to sea-water fisheries, etc. and sections 3, 9, 12, 15, and 32 of the Act of 13 June 1997 No. 42 relating to the Norwegian Coast Guard. Submitted by the Ministry of Foreign Affairs.

Introductory provisions

§ 1

The purpose of these regulations is to promote the development and conduct of marine scientific research in accordance with the 1982 United Nations Convention on the Law of the Sea, in order to increase scientific knowledge of the marine environment and the processes occurring there, and to ensure that such research is carried out in accordance with the legislation in force at any time on activities in Norway's internal waters, territorial sea and economic zone and on the continental shelf.

§ 2

These regulations apply subject to any limitations arising from international law or agreements with foreign States.

§ 3

The provisions of these regulations apply to foreign marine scientific studies in Norway's internal waters, territorial sea and economic zone and on the continental shelf. Insofar as the foreign studies are of direct significance for the exploration and exploitation of natural resources, whether living or non-living, or in any other way affect Norway's rights in accordance with international law, this shall have no effect on the provisions set out in or issued pursuant to the acts listed in section 7 of these regulations. In the event of any conflict, such provisions have precedence over these regulations.

§ 4

For the purposes of these regulations, marine scientific research is considered to be foreign if the researching state is not Norway, or if the research is to be carried out by an international organization.

Pursuant to these regulations, the researching State is the State in which the researcher or institution that is heading the project is resident. If researchers or institutions from several countries are to take part in a research project, the State where the project's leading researcher or institution is resident shall be considered to be the researching State.

For the purposes of these regulations, the term international organization shall mean an intergovernmental organization whose purpose is to conduct scientific research.

§ 5

These regulations do not apply to foreign warships. The term foreign warships means vessels that within the scope of the Norwegian provisions in force at any time on the admission of foreign warships and military aircraft to the Norwegian territorial sea in peacetime.

§ 6

Foreign marine scientific research in Norway's internal waters, territorial sea and economic zone and on the continental shelf shall not be carried out without the consent of the Directorate of Fisheries.

Implied consent is considered to have been given in the cases described in section 10 of these regulations. The Directorate of Fisheries may grant exemptions from the requirement for consent if special grounds so indicate.

Application procedure

§ 7

The provisions of these regulations have no effect on the applicant's duties pursuant to:

- Act of 18 August 1914 No. 3 relating to defence secrets
- Act of 21 June 1963 No. 12 relating to scientific research and exploration for and exploitation of subsea natural resources other than petroleum resources
- Act of 17 June 1966 No. 19 relating to Norway's fishery limit and to the prohibition against fishing etc by foreign nationals within the fishery limit
- Act of 3 June 1983 No. 40 relating to sea-water fisheries, etc

- Act of 24 June 1988 No. 64 relating to the entry of foreign nationals into the Kingdom of Norway and their presence in the realm
- Act of 16 June 1989 No. 59 relating to the Pilotage Service
- Act of 29 November 1996 No. 72 relating to petroleum activities
- Act of 13 June 1997 No. 42 relating to the Norwegian Coast Guard
- Regulations of 1 June 1973 No. 3780 relating to the establishment of bird reserves and large nature conservation areas on Svalbard
- Regulations of 21 December 1990 No. 1028 relating to the entry of foreign nationals into the Kingdom of Norway and their presence in the realm
- Regulations of 23 December 1994 No. 1130 relating to foreign non-military vessels entering into and passing through the Norwegian territorial sea in peacetime.

§ 8

Applications to engage in marine scientific research shall be sent to the Directorate of Fisheries by the researcher, research institution or international organization that is to conduct the research. The application shall be sent six months before the planned start-up date for the project, unless the Directorate of Fisheries permits a shorter time limit in connection with the individual application. The Directorate of Fisheries shall answer an application without any unnecessary delay, normally within two months after the application was received.

§ 9

Applications to engage in marine scientific research shall contain a full description of:

(a) the name and nationality of the institution responsible for the project, its director, and the person in charge of the project,

(b) the nature and objectives of the project,

(c) the methods and means to be used, including the name, owner, State where registered, liability insurance, tonnage, type and class of the vessel and a description of scientific equipment,

(d) the precise geographical areas in which the project is to be conducted, the expected date of first appearance and final departure of the research vessel, or deployment of the equipment and its removal, as appropriate,

(e) the extent to which it is considered that the coastal State should be able to participate or to be represented in the project.

A special form shall be used for the application. The form is included as an appendix to these regulations, and will be updated by the Directorate of Fisheries. The application should be written in English.

§ 10

Consent to engage in marine scientific research is considered to be granted when the Directorate of Fisheries has notified the applicant of this.

Consent is also considered to have been granted four months after its receipt, unless the Directorate of Fisheries has informed the researching State or the international organization that

(a) consent will not be granted,

(b) the information that has been provided is clearly not in accordance with the facts,

(c) further information has been requested, or

(d) the State or international organization in question has outstanding obligations to the coastal State from a prior research project carried out in Norway's internal waters, territorial sea and economic zone or on the continental shelf.

The second paragraph does not apply

(a) if otherwise provided by provisions set out in or issued pursuant to the acts listed in section 7 of these regulations, or

(b) to research in Norway's internal waters and territorial sea.

Conditions for granting consent

§ 11

The Directorate of Fisheries may grant consent to engage in marine scientific research subject to compliance with the following conditions:

(a) that the Norwegian authorities or the researchers they designate shall have the right to participate or be represented in the marine scientific research project, especially on board research vessels and other craft or scientific research installations, when practicable, without payment of any remuneration to the scientists of the coastal State and without obligation to contribute towards the costs of the project,

(b) that the Norwegian authorities shall, if they so request, be provided with preliminary reports as soon as practicable, and with the final results and conclusions after the completion of the research,

(c) that the Norwegian authorities shall, if they so request, be provided with access to all data and samples derived from the marine scientific research project and likewise furnished

with data which may be copied and samples which may be divided without detriment to their scientific value,

(d) that the Norwegian authorities shall, if they so request, be provided with an assessment of such data, samples and research results as are mentioned in litra (c), or with assistance in their assessment or interpretation.

Duties connected with the research

§ 12

Marine scientific research shall not unjustifiably interfere with other legitimate uses of the sea.

§ 13

Any activities in connection with marine scientific research shall be carried out in accordance with all legislation that applies to Norway's internal waters, territorial sea and economic zone and the continental shelf, including those for the protection and preservation of the marine environment.

§ 14

The researching State or the international organization shall inform the coastal State immediately of any major change in the research programme and of any change in the vessel to be used.

§ 15

A researcher, research institution or international organization has a duty to comply with a request from the Norwegian Coast Guard to inspect a research vessel or research installation.

Inspection may be carried out by coercive means if the vessel or installation is being used for

(a) activities that fall within the scope of Norway's sovereign rights according to Parts V and VI of the Convention on the Law of the Sea, or

(b) research within the territorial limit.

§ 16

The Directorate of Fisheries may require the research vessel to give notification of its positions daily and require that the vessel shall have satellite tracking equipment installed, and may also require the vessel to give notification of other matters relating to its research activities, such as the start of research activities and the beginning of sampling.

Scientific installations and equipment

§ 17

Safety zones of a reasonable breadth not exceeding a distance of 500 metres may be created around scientific research installations.

§ 18

The deployment and use of any type of scientific research installations or equipment shall not constitute an obstacle to established international shipping routes.

§ 19

Installations or equipment referred to in this section shall bear identification markings indicating the State of registry or the international organization to which they belong and shall have adequate internationally agreed warning signals to ensure safety at sea and the safety of air navigation, taking into account rules and standards established by competent international organizations.

§ 20

The researcher, research institution or international organization shall make the results of marine scientific research in Norway's internal waters, territorial sea and economic zone and on the continental shelf internationally available as soon as practicable through appropriate national and international channels.

Enforcement

§ 21

The Directorate of Fisheries may require the suspension of marine scientific research if the research activities are not being conducted in accordance with the information communicated as provided under section 9 of these regulations, or in the event of failure to comply with conditions for consent laid down pursuant to section 11 of these regulations.

§ 22

The Directorate of Fisheries may require the cessation of marine scientific research if any matters that have given grounds for suspension pursuant to section 21 have not been rectified within a reasonable period of time, or if the marine scientific research is being conducted in a

way that is so different from the information on the research that the Norwegian authorities received pursuant to section 8 of these regulations that it amounts to a major change in the research activities.

§ 23

These regulations are without prejudice to the right of the Norwegian authorities to enforce the provisions set out in or pursuant to the Acts mentioned in section 7 of these regulations, including enforcement by means of control and enforcement measures.

Entry into force

§ 24

These regulations enter into force on 1 July 2001.

Appendix

Notification of proposed research cruise

PART A: GENERAL

1. NAME OF RESEARCH SHIP CRUISE NO.

2. DATES OF CRUISE From: To:

3. OPERATING AUTHORITY:

   TELEPHONE:

   TELEFAX:

   TELEX:

4. OWNER

   (if different from no. 3)

5. PARTICULARS OF SHIP:

   Name:

   Nationality:

   Overall length: metres

   Maximum draught: metres

Net tonnage:

Propulsion: Diesel

Call sign:

Registration port and number

(if registered fishing vessel)

6. CREW Name of master:

Number of crew:

7. SCIENTIFIC PERSONNEL

Name and address of

scientist in charge:

Tel/telex/fax no.:

No. of scientists:

8. GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE (with reference to latitude and longitude)

9. BRIEF DESCRIPTION OF PURPOSE OF CRUISE

10. DATES AND NAMES OF INTENDED PORTS OF CALL

11. ANY SPECIAL REQUIREMENTS AT PORTS OF CALL

1. PART B: DETAILS

1. NAME OF RESEARCH SHIP CRUISE NO.

2. DATES OF CRUISE From To

3. a) PURPOSE OF RESEARCH

b) GENERAL OPERATIONAL METHODS (including full description of any fish gear, trawl type, mesh size, etc.)

4. ATTACH CHART showing (on an appropriate scale) the geographical area of intended work, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment, areas to be fished

5. a) TYPES OF SAMPLES REQUIRED (e.g., geological/water/plankton/fish/radionuclide)

b) METHODS OF OBTAINING SAMPLES (e.g., dredging/coring/drilling/fishing, etc. When using fishing gear, indicate fish stocks being worked, quantity of each species required, and quantity of fish to be retained on board).

6. DETAILS OF MOORED EQUIPMENT

Dates

Laying	Recovery	Description	Depth	Latitude	Longitude

7. ANY HAZARDOUS MATERIALS (chemicals/explosives/gases/radioactives, etc.

(Use separate sheet if necessary)

a) Type and trade name NIL

b) Chemical content (and formula) NIL

c) IMO IMDG code (reference and UN no.) NIL

d) Quantity and method of storage on board NIL

e) If explosives give dates of detonation NIL

- Method of detonation
- Position of detonation
- Frequency of detonation
- Depth of detonation
- Size of explosive charge in kg.

8. DETAIL AND REFERENCE OF

a) Any relevant previous/future cruises

b) Any previously published research data relating to the proposed cruise

9. NAMES AND ADDRESSES OF SCIENTISTS OF THE COASTAL STATE(S) IN WHOSE WATERS THE PROPOSED CRUISE TAKES PLACE WITH WHOM PREVIOUS CONTACT HAS BEEN MADE

10. STATE

a) Whether visits to the ship in port by scientists of the coastal state concerned will be acceptable (Yes/No)

b) Participation of an observer from the coastal state for any part of the cruise together with the dates and the ports for embarkation and disembarkation

c) When research data from the intended cruise are likely to be made available to the coastal state and by what means

PART C. SCIENTIFIC EQUIPMENT

Complete the following table using a separate page for each coastal state

Coastal state

Port of call

Dates

Indicate "YES" or "NO"

				DISTANCE FROM COAST		
List scientific work by function e.g. Magnetometry Gravity Diving Seismics Seabed sampling Bathymetry Trawling Echo sounding Water sampling U/W TV Moored instr. Towed instr.	Water column including sediment sampling of the seabed	Fisheries research within fishing limits	Research concerning the natural resources of the continental shelf or its physical characteristics	Within 4 nm	Between 4-12 nm	Between 12-200 nm

.....

(On behalf of the Principal Scientist)

Dated

NB. IF ANY DETAILS ARE MATERIALLY CHANGED REGARDING DATES/AREA OF OPERATION AFTER THIS FORM HAS BEEN SUBMITTED, THE COASTAL STATE AUTHORITIES MUST BE NOTIFIED IMMEDIATELY.

United Nations A/AC.259/4/Corr.1

General Assembly

Distr.: General
7 May 2001

Original: English

United Nations Open-ended Informal Consultative Process established by the General Assembly in its resolution 54/33 in order to facilitate the annual review by the Assembly of developments in ocean affairs
Second meeting
7-11 May 2001

Marine science and the development and transfer of marine technology, including capacity-building

Submitted by the delegation of Norway

Corrigendum

1. The name of the Process should read as above.

2. **Section D, paragraph 27**

For United Nations Economic and Social Council *read* United Nations Educational, Scientific and Cultural Organization

01-36284 (E) 070501

United Nations A/AC.259/5

General Assembly

Distr.: General
7 May 2001

Original: English

United Nations Open-ended Informal Consultative Process established by the General Assembly in its resolution 54/33 in order to facilitate the annual review by the Assembly of developments in ocean affairs
Second meeting
7-11 May 2001

Format and annotated agenda

The 1st plenary meeting of the second Meeting of the United Nations Open-ended Informal Consultative Process established by the General Assembly in its resolution 54/33 in order to facilitate the annual review by the Assembly of developments in ocean affairs adopted, on 7 May 2001, its format and annotated agenda as contained in annexes I and II to document A/AC.259/L.2, with the following amendments:

(a) All references to the Consultative Process throughout the document *should read*:

"United Nations Open-ended Informal Consultative Process established by the General Assembly in its resolution 54/33 in order to facilitate the annual review by the Assembly of developments in ocean affairs";

(b) Annex I, paragraph 10 (a) *should read*:

"10. The report of the second Meeting will consist of:

(a) A statement of:

(i) Issues to be suggested to the General Assembly for consideration;

(ii) Elements related to those issues to be proposed for consideration by the General Assembly,

in relation to resolutions of the Assembly under its agenda item entitled "Oceans and the law of the sea";

(c) In appendix I, paragraph 27, the penultimate sentence *should read*:

"Others are closely connected to the issues to which General Assembly resolutions 55/7 and 55/8 gave priority: fisheries and marine pollution and degradation from land-based activities.";

01-36295 (E) 070501

(d) In appendix I, paragraph 30, the last sentence *should read*:

"Given the priority accorded by General Assembly resolutions 55/7 and 55/8 to fisheries and the impact on the oceans of land-based activities, what particular issues need to be pursued to support the provisions of those resolutions?"